

REMARKS

In response to the Office Action of May 1, 2008, claims 7, 10, 11 and 22 have been amended. Claims 7, 10, 11 and 22 have been amended to correct informalities. All amendments are supported by the specification as originally filed.

Applicant notes that on the Notice of References Cited, PTO-892, the reference cited in the Office Action, Siwinski (U.S. Patent 7,102,632), is not listed. Applicant requests that with the next Office Action, a corrected PTO-982 be provided to include this reference.

Applicant respectfully requests reconsideration and withdrawal of the objections and rejections in view of the following discussion.

Objection to the Drawings

At page 2 of the Office Action, the drawings are objected to under 37 C.F.R. 1.83(a) for not showing the feature of an "image improvement unit." Applicant respectfully disagrees.

In the application as filed, an image improvement unit is stated to be included in the figures. For example, at page 6, lines 32-33, it is stated in reference to Figure 1, "In this embodiment the display processor 17 serves as an image improvement unit." Therefore, in Figure 1 the image improvement unit is shown as the display processor. Furthermore, at page 12, lines 10-12, it is stated in reference to Figure 2, "In this second embodiment the image improvement processing is performed by the micro controller 5'." Therefore, in Figure 2 the image improvement unit corresponds to the micro controller. Thus, it is clear that in both Figure 1 and Figure 2, an "image improvement unit" is shown and is defined in the specification.

Therefore, it is respectfully submitted that both Figure 1 and Figure 2 show the feature of an "image improvement unit."

Claim Rejections- 35 U.S.C. § 112

At page 3 of the Office Action, claims 1-22 are rejected under 35 U.S.C. 112, first paragraph for failing to comply with the written description requirement.

With respect to claims 1, 7, 11, and 20-22, it is asserted by the Office that there is no support for “determining a property of the digital image.” Applicant respectfully disagrees.

The specification discloses “determining a property of the digital image,” including at page 7, lines 18-22 of the application as filed, where it is stated, “the image improvement unit, i.e. the display processor 17, determines a property, or typically several properties of the image and compares these image properties with one or more properties of the display 11.” Furthermore, the properties of the image include, but are not limited to, contrast, brightness, and contents or type of image, i.e. for example whether the image is imaginary or a photograph (Application as filed, page 3, lines 13-16). These properties can be determined by the image improvement unit according to commonly known methods or determined by the digital image type. Therefore, it is respectfully submitted that there is ample support in the specification for “determining a property of the digital image,” as featured in claims 1, 7, 11, and 20-22.

Further regarding claims 1, 7, 11, and 20-22, it is asserted by the Office that there is no support for “applying said parameters so as to produce an image transformation of said digital image for presentation on said display.” Applicant respectfully disagrees.

This feature of claim 1, 7, 11 and 20-22 is supported by the specification of the application as filed, including at page 10, lines 16-25, where it states:

The display processor 17, at a predetermined repetition rate, repeatedly evaluates the instantaneous state of the display, i.e. the instantaneous properties thereof, by obtaining that information from the display adjustment unit 15. Then the display processor uses that information in conjunction with information of the image for determining new parameters for the image processing and provides

the parameters to the display processor, which uses them when performing the image processing method. Finally the image is readjusted.

Therefore, it is respectfully submitted that there is support in the specification for the feature of claims 1, 7, 11, and 20-22 of "applying said parameters so as to produce an image transformation of said digital image for presentation on said display."

At page 4 of the Office Action, claims 1, 7, 11, and 20-22 are rejected under 35 U.S.C 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claims 1, 7, 11, and 20-22, it is asserted by the Office that "determining an instantaneous property of the display" is not clear. Specifically, the Office asserts it is unclear what is instantaneous property of the display and how that instantaneous property of the display is determined. Applicant respectfully disagrees.

As disclosed in the specification, the instantaneous properties of the display can include, but are not limited to, contrast, brightness, illumination, and color intensity (Application as filed, page 3, lines 7-10). Furthermore, "The display processor 17, at a predetermined repetition rate, repeatedly evaluates the instantaneous state of the display, i.e. the instantaneous properties thereof, by obtaining that information from the display adjustment unit 15" (Application as filed, page 10, lines 16-20). As the instantaneous properties are evaluated repeatedly, the properties can be measured at several instances in order to monitor the instantaneous state of the display over time. Therefore, the specification of the application as filed is clear with respect to what an instantaneous property of the display is and how it is determined. Thus, it is respectfully submitted that the feature of claims 1, 7, 11, 20-22 of "determining an instantaneous property of the display" is clear and complies with 35 U.S.C. 112, second paragraph.

Further regarding claims 1, 7, 11, and 20-22, it is asserted by the Office that "determining a property of the digital image" is not understood. Specifically, the Office does not understand what a property of the digital image is and how it is determined. Applicant respectfully disagrees.

As stated above, the specification of the application as filed clearly points out examples of properties of the digital image are and how they are determined. In particular, one of skill in the art would understand that the properties can be determined by the image improvement unit according to commonly known methods or determined by the digital image type. Thus, it is respectfully submitted that the feature of claims 1, 7, 11 and 20-22 of "determining a property of the digital image" complies with 35 U.S.C. 112, second paragraph.

Further regarding claims 1, 7, 11 and 20-22, it is asserted by the Office that "determining parameters for an image processing method" is not clear. Specifically, the Office asserts it is unclear what the parameters are and how those parameters are determined. Applicant respectfully disagrees.

This feature of the claims is clearly stated in the specification of the application as filed, including at page 9, lines 31-36, which states, "The display processor 17 determines the parameters to be used by the image processing method from a combination of properties of the image and the display. More particularly, the image is analysed, and preferably statistical properties are measured, for example by means of histograms." Furthermore, parameters include, for example, brightness and contrast (Application as filed, page 1, lines 19-20). The parameters for an image processing method differ from the instantaneous property of the display in that the instantaneous property is a onetime measurement of a parameter, such as brightness or contrast. Thus, it is respectfully submitted that the feature of claims 1, 7, 11 and 20-22 of "determining parameters for an image processing method" is clear and allowable under 35 U.S.C. 112, second paragraph.

Claim Rejections- 35 U.S.C. § 102

At page 5 of the Office Action, claims 1, 7, 11 and 20-22 are rejected under 35 U.S.C. 102(e) as being unpatentable by Siwinski (U.S. Patent 7,102,632).

With respect to claim 7, it is asserted by the Office that Siwinski discloses each feature of the claim, with reference made to Figure 3, column 1, lines 35-43 and column 2, lines 24-44 of Siwinski. Applicant respectfully disagrees.

Siwinski is directed to a method of saving power in a color organic electroluminescent display of the type having color emitting elements with different light emitting efficiencies, including the steps of: determining the color of the elements having the highest efficiency; converting a color digital image to be displayed on the display to a monochrome image; and displaying the monochrome image using the determined color elements (Siwinski, Abstract). The method of Siwinski is used when the power supply is low on stored power, so the Red Green Blue (RGB) levels of the color image are weighted to produce a more efficient grayscale image (Siwinski, column 2, lines 59-65).

In contrast to claim 7, Siwinski does not disclose an image improvement unit being configured to determine an instantaneous property of the display. Siwinski is directed to adjusting an image only when the device is low in power, wherein the adjustment is made according to a predetermined proportion, as seen in column 2, line 37. Thus, there is no determination of instantaneous properties of the display itself. Furthermore, the image processing method is not affected by any instantaneous property of the display. Instead, the channels are selected based on a weighted luminance sum, which is dependent upon the efficiency of the light emitting materials and not on instantaneous property of the display.

Therefore, because Siwinski does not disclose all of the features of claim 7, it is respectfully submitted that claim 7 is not unpatentable by Siwinski under 35 U.S.C. 102(e).

With respect to claims 1, 11 and 20-22, the claims are rejected for the same reasons as provided for claim 7. Therefore, for the aforementioned reasons with respect to claim 7, it is respectfully submitted that claims 1, 11 and 20-22 are in allowable form.

Claim Rejections- 35 U.S.C. § 103

At page 6 of the Office Action, claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable of Siwinski. It is asserted by the Office that Siwinski teaches a mobile device comprising a display unit, with reference made to Figure 3 of Siwinski. The Office further asserts that although Siwinski does not specifically teach a method wherein all measures are repeated at a repetition rate, it is obvious to one skilled in the art that all measures of method of Siwinski are repeated at a repetition rate. Applicant respectfully disagrees.

As claim 2 is dependent upon independent claim 1, it is respectfully submitted that claim 2 is in allowable form, at least in view of such dependency.

At page 7 of the Office Action, claims 3-5, 8-10, 14-16, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Siwinski in view of Ouderkirk et al. (U.S. Patent No. 6,124,971, hereinafter Ouderkirk). Applicant respectfully disagrees.

As dependent claims 3-5 are dependent upon independent claim 1, and dependent claims 8-10, 14-16, 18, and 19 are dependent upon independent claim 7, it is respectfully submitted that these dependent claims are in allowable form, at least in view of their dependency on independent claims 1 and 7.

At page 9 of the Office Action, claims 6, 12, 13, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Siwinski in view of Ouderkirk and further in view of Khan et al. (Pub. No. US 20020101554, hereinafter Kahn). Applicant respectfully disagrees

As dependent claims 6, 12, 13, and 17 are dependent upon independent claim 1, it is respectfully submitted that these dependent claims are in allowable form, at least in view of their dependency on independent claim 1.

Conclusion

In view of the foregoing, it is respectfully submitted that the present application as amended is in condition for allowance and such action is earnestly solicited. The undersigned hereby authorizes the Commissioner to charge Deposit Account No. 23-0442 for any fee deficiency required to submit this response.

Respectfully submitted,

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